CLAIMS

What is claimed is:

1. A method for personalizing an interactive voice response (IVR) system to reduce a number of key sequences to reach a desired source of information, comprising:

storing a caller profile; and

retrieving the caller's profile to construct a personalized IVR dialogue menu and play out the personalized menu.

2. The method of claim 1, further comprising:

tracking an access pattern of said caller.

3. The method of claim 1, further comprising:

specifying, by said caller, a personalized IVR menu.

4. The method of claim 1, further comprising:

providing a tracking of IVR accessing patterns of said caller such that a shortcut is provided to a desired location based on said caller's IVR accessing patterns.

5. The method of claim 4, wherein said shortcut is based on a most-recently accessed IVR pattern.

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6. The method of claim 4, wherein said shortcut is based on a most-frequently accessed IVR pattern.

7. The method of claim 3, wherein a specification of said personalized IVR menu is performed over a telephone.

8. The method of claim 3, wherein a specification of said personalized IVR menu is performed over a network.

9. The method according to claim 8, wherein said network comprises at least one of a World-Wide-Web (WWW), an intranet, and a personal area network (PAN).

10. The method of claim 1, further comprising:

    displaying to said caller said IVR menu to reduce a number of key sequences during interactions.

11. The method of claim 10, further comprising:

    performing a tree-based collapsing of said personalized IVR dialogue menu.

12. The method of claim 1, further comprising:

    inserting a personalized sub-menu into said personalized IVR dialogue menu.

13. The method according to claim 1, further comprising:

inserting an advertisement into said caller's personalized IVR dialogue menu,

based on the caller's IVR past accessing patterns, during said caller's navigation of

said personalized IVR dialogue menu.

14. The method according to claim 13, wherein said inserting of said advertisement is

based on contents of said menu that the caller has accessed.

15. The method according to claim 1, wherein said retrieving is performed upon said

system receiving a telephone call from said user.

16. A system for personalizing an interactive voice response (IVR) system to reduce

a number of key sequences to reach a desired source of information, comprising:

   a storage for storing a caller profile; and

   a retrieval unit for retrieving the caller's profile to construct a personalized

IVR dialogue menu and play-out the personalized menu.

17. The system according to claim 16, wherein said retrieval unit retrieves said

caller's profile upon said system receiving a telephone phone call from said caller.

18. The system according to claim 16, wherein said retrieval unit is selectively

interfaced with a network and a public switch telephone network (PSTN).

19. The system according to claim 18, wherein said retrieval unit includes:

a telephone interface module for selectively interfacing with said PSTN and for selectively receiving a predetermined tone and a voice input from said caller via the PSTN,

said telephone interface module selectively transmitting at least one of synthesized and stored voice messages to said caller via the PSTN,

wherein said personalized IVR dialogue menu is configurable by said caller through the PSTN via said telephone interface module.

20. The system according to claim 16, wherein said retrieval unit further includes:

a dialogue handler, coupled to receive an input from said caller, for modeling state transitions of said system, to provide an output,

the output of said dialogue handler module determining a message to be returned to said caller, and an input of said dialogue handler module being derived from a caller input via at least one of a predetermined tone and a voice message from said caller.
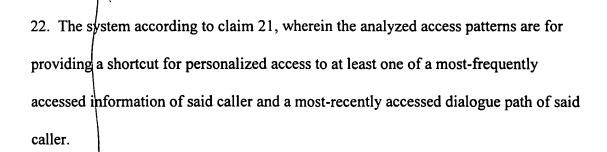
21. The system according to claim 16, wherein said retrieval unit further includes:

a dialogue logging and analysis module for recording a dialogue between the IVR system and said caller, and logging input sequences from said caller of the IVR system while said caller conducts said dialogue with said IVR system,

wherein said input sequences logged are for analyzing said caller's access patterns.

22. The system according to claim 21, wherein the analyzed access patterns are for providing a shortcut for personalized access to at least one of a most-frequently accessed information of said caller and a most-recently accessed dialogue path of said caller.

5   23. The system according to claim 22, wherein, based on said input sequences logged, said dialogue logging and analysis module provides at least one of personalized direct access automatically when said caller next calls the IVR system and a suggestion of such access pattern to said caller for creating said personalized menu.

24. The system according to claim 16, wherein said retrieval unit further includes:

10   a dialogue automatic playout module for allowing personalized access of information by said caller,

wherein if said caller decides to use a personalized shortcut unique to said caller, control sequences representing said shortcut are input to said dialogue automatic playout module.

15   25. The system according to claim 24, wherein said retrieval unit further includes:

a personalized menu processor module for constructing said shortcut for the personalized menus specified by said caller,

wherein specification is selectively performed over one of a telephone interaction and a world-wide network, and

once specified by said caller, the personalized menu is represented by one of a list of direct dialogue paths to desired information and a hierarchical dialogue menu.

26. The system according to claim 19, wherein said retrieval unit further includes:

a network interface module for communicating with external systems via the network to retrieve information for the IVR system to playback via said telephone interface module,

wherein said network interface module presents a configurable menu to the caller via the network for the caller to specify the caller's personalized dialogue menu,

wherein the network interface module parses text messages into a predetermined format such that the parsed text messages are used to interact with the caller through said telephone interface module.

27. The system according to claim 18, wherein said network includes at least one of the Internet, an intranet, and a personal area network.

28. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method for method for personalizing an interactive voice response (IVR) system to reduce a number of key sequences to reach a desired source of information, said method comprising:

storing a caller profile; and

retrieving the caller's profile to construct a personalized IVR dialogue menu and play out the personalized menu.